



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,190	10/20/2003	Peter John Deacon	GB920020076US1	4441

7590 10/23/2006

IBM Corp
IP Law, Dept.
90A/9032
9000 S Rita Road
Tucson, AZ 85744

EXAMINER

ASSESSOR, BRIAN J

ART UNIT	PAPER NUMBER
----------	--------------

2114

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/689,190	DEACON ET AL.	
	Examiner	Art Unit	
	Brian J. Assessor	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 15 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-11 have been canceled.

Claims 12-19 have been added and are addressed below.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 16-19 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In the specification defines computer readable medium to include, "using any memory technology, present or future, including but not limited to, semiconductor, magnetic, or optical, or transmitted sing any communications technology, present or future, including but not limited to optical, infrared, or microwave." These defined mediums are forms of energy, which is not patentable under 35 USC 101, proper correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by McQueen (5,974,568).

As per claim 12, McQueen teaches:

A method comprising:

associating an error log with an enterprise-class environment, wherein the error log records faults that are detected in a hierarchy of data storage operations in a computer system, and wherein the error log attributes a single root cause to faults in multiple data storage operations in the computer system; (McQueen column 2, lines 3-17)

passing an identity of an event causing failure through a chain of failing requests until the identity of the event causing failure reaches an originator of a request for data from one or more of the hierarchy of data storage operations, wherein the chain of failing requests, which is caused by an error in a physical storage device, is promulgated through the hierarchy of data storage operations in an upward hierarchical manner from the physical storage device to the originator of the request for data; (McQueen column 3, lines 1-10)

based on the identity of the event, determining, by the originator of the request for data, an error event and a storage device that must be repaired for each detected failure, wherein multiple errors, in the hierarchy of data storage operations, that are caused by a single fault are diagnosed to a single fault. (McQueen column 3, lines 9-14)

As per claim 16, McQueen teaches:

Claim 16 is a tangible computer readable medium claim corresponding to the method claim 12. Therefore, claim 16 is rejected for the same rationale set forth in claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 14, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McQueen (5,974,568) in view of Morimoto (7,016,957).

As per claim 13, McQueen teaches:

identifies a particular event that is capable of causing an Input/Output service to fail in the hierarchy of data and storage operations (McQueen column 3, lines 43-49) information that details a detected fault to enable service personnel to repair a root-cause of the detected fault. (McQueen column 3, lines 43-49)

McQueen fails to explicitly disclose a method for adding a unique identifier to the error log, wherein the unique identifier, and wherein the error log contains the fault information.

Although McQueen teaches keeping a record of the errors and the error information, it is not specifically done in a error log and with unique identifiers. In column 5, lines 39-49; lines 57-59, Morimoto clearly teaches a method in which unique identifiers are used in an error log to identify errors and maintain more specific fault information on those errors. It would have been obvious to a person of ordinary skill in the art at the time of invention to include the error logging system as taught by Morimoto in order to create a more reliable error record. This would have been obvious because Morimoto teaches that the above method is better suited for keeping track of reliable error records and with better efficiency. (Morimoto column 2, lines 4-14)

As per claim 14, McQueen teaches:

The method of claim 13, further comprising:

using the unique identifier as part of a message, to the originator of the request for data, indicating that a service must be failed due to the error, wherein the service is provided by a component in a virtualization subsystem, wherein the virtualization subsystem is a software stack that manages the hierarchy of data storage operations, (McQueen column 4, lines 14-23) wherein the hierarchy of data storage operations includes controlling a Redundant Array of Inexpensive Disks (RAID) storage device, virtualizing memory storage, flash copying of data, and caching of data. (McQueen column 3, lines 18-30; these services could apply to various forms of data systems.)

As per claims 17 and 18 McQueen teaches:

Claims 17 and 18 respectfully are tangible computer readable mediums claims corresponding to the method claims 13 and 14. Therefore, Claims 13 and 14 are rejected for the same rationale set forth in claims 17 and 18.

Allowable Subject Matter

Claims 15 and 19 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Assessor whose telephone number is (571) 272-0825. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2114

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BA


SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER